



C O F C

**PATENT**  
Attorney Docket No. ASX-064

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANTS:	Sellers	EXAMINER:	Walberg, Teresa
SERIAL NO.:	10/642,509	FILING DATE:	August 18, 2003
PATENT NO.	6,967,305 <i>B2</i>	ISSUE DATE:	November 22, 2005
GROUP NO.	2632	CONFIRMATION NO.	1663
TITLE:	COMPOSITE ELECTRODE FOR A PLASMA ARC TORCH		

Mail Stop Post Issue  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Certificate**  
**JAN 04 2006**  
**of Correction**

**REQUEST FOR CERTIFICATE OF CORRECTION UNDER 35 U.S.C. § 254 and § 255**

The Assignee of record in the above-referenced patent, MKS Instruments, Inc., by virtue of an assignment recorded July 1, 2005 at Reel 016737, Frame 0202, hereby requests that a Certificate of Correction be issued for U.S. Patent No. 6,967,305 under 35 U.S.C § 254 (37 C.F.R. § 1.322) and 35 U.S.C § 255 (37 C.F.R. §§ 1.323).

One of the References Cited on the cover pages of this patent is incorrect. Specifically, on page 2 of the U.S. Patent No. 6,967,305, the Patent Office mistakenly printed the number of the Johnson et al. patent as 6,332,631 instead of 6,332,961. A copy of the cover page of the 6,332,961 patent together with the Examiner's initialed PTO 1449 page listing the Johnson reference correctly as 6,332,961 is enclosed as Appendix A. Assignee respectfully requests that the Commissioner issue a Certificate of Correction under 35 U.S.C § 254 to correct this Patent Office mistake.

Applicant has also made a typographical error in claim number 48. During prosecution, Applicant amended claim 48 to change the antecedent basis of "an inductor of the resonant circuit" to "the inductor of;" as shown in column 19, line 11 of U.S. Patent No. 6,967,305.

12/30/2005 HVUONG2 00000055 503081 6967305

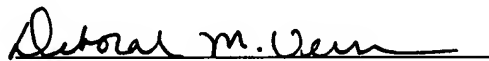
01 FC:1811 100.00 DA

**JAN 06 2006**

Applicants meant to delete the word "of" appearing after the word inductor when the phrase "the resonant circuit" was deleted in the amendment filed on April 28, 2005. Assignee respectfully submits that this mistake is of a clerical nature and occurred in good faith during prosecution. Assignee further submits that correction of this mistake does not constitute the entry of new matter nor would it require reexamination of the patent. Accordingly, Assignee requests that the Commissioner issue a Certificate of Correction under 35 U.S.C § 255 to correct the typographical error in claim 48 by deleting the word "of" appearing in column 19, line 11.

If there are any questions regarding this matter, the U.S. Patent Office is kindly requested to contact the undersigned at the telephone number identified below. The Commissioner is hereby authorized to charge any fee necessary to enter this paper to Attorney's Deposit Account No. 50-3081.

Respectfully submitted,



Deborah M. Vernon  
Attorney for the Applicant  
Proskauer Rose LLP  
One International Place  
Boston, MA 02110-2600

Date: December 23, 2005  
Reg. No. 55,699  
Tel No. (617) 526-9836  
Fax No. (617) 526-9899

JAN 06 2006



# TRANSMITTAL FORM

Application Serial Number	10/642,509
Filing Date	August 18, 2003
First Named Inventor	Sellers
Group Art Unit	2632
Examiner Name	Walberg, Teresa
Attorney Docket No.	ASX-064
Patent No.	6,967,305
Issue Date	November 22, 2005

## ENCLOSURES (check all that apply)

- |  |  |   |
|--|--|---|
| <input checked="" type="checkbox"/> Fee Transmittal Form<br><input type="checkbox"/> Check Attached<br><input checked="" type="checkbox"/> Copy of Fee Transmittal Form<br><br><input type="checkbox"/> Amendment/Response<br><input type="checkbox"/> Preliminary<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s)<br><input type="checkbox"/> Letter to Official Draftsperson including Drawings [Total Sheets ____]<br><br><input type="checkbox"/> Supplemental Information Disclosure Statement<br><input type="checkbox"/> Form PTO-1449<br><input type="checkbox"/> Copies of IDS Citation Labeled<br><br><input type="checkbox"/> Certified Copy of Priority Document(s)<br><br><input type="checkbox"/> Sequence Listing submission<br><input type="checkbox"/> Paper Copy/CD<br><input type="checkbox"/> Computer Readable Copy<br><input type="checkbox"/> Statement verifying identity of above | <input type="checkbox"/> Copy of Notice to File Missing Parts of Application (PTO-1553)<br><br><input type="checkbox"/> Formal Drawing(s)<br><br><input type="checkbox"/> Request For Continued Examination (RCE) Transmittal<br><br><input type="checkbox"/> Power of Attorney (Revocation of Prior Powers)<br><br><input type="checkbox"/> Terminal Disclaimer<br><br><input type="checkbox"/> Executed Declaration and Power of Attorney for Utility or Design Patent Application<br><br><input type="checkbox"/> Small Entity Statement<br><br><input type="checkbox"/> CD(s) for large table or computer program<br><br><input type="checkbox"/> Amendment After Allowance<br><br><input checked="" type="checkbox"/> Request for Certificate of Correction (including Appendix A; total 4 pages)<br><input checked="" type="checkbox"/> Certificate of Correction (in duplicate) | <input type="checkbox"/> Notice of Appeal to Board of Patent Appeals and Interferences<br><br><input type="checkbox"/> Appeal Brief (in triplicate)<br><br><input type="checkbox"/> Status Inquiry<br><br><input checked="" type="checkbox"/> Return Receipt Postcard<br><br><input type="checkbox"/> Certificate of Facsimile Transmission under 37 C.F.R. 1.8<br><br><input type="checkbox"/> Additional Enclosure(s) (please identify below) |
|--|--|---|

### CERTIFICATE OF FIRST CLASS MAILING UNDER 37 C.F.R. 1.8

I hereby certify that this correspondence, and any document(s) referred to as enclosed herein, is/are being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to Mail Stop Post Issue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 23<sup>rd</sup> day of December, 2005.

Jamie Crystal-Lowry

## CORRESPONDENCE ADDRESS

Direct all correspondence to: Patent Administrator  
Proskauer Rose LLP  
One International Place  
Boston, MA 02110-2600  
Tel. No.: (617) 526-9600  
Fax No.: (617) 526-9899

## SIGNATURE BLOCK

Date: December 23, 2005  
Reg. No.: 55,699  
Tel. No.: (617) 526-9836  
Fax No.: (617) 526-9899

Respectfully submitted,  
  
Deborah M. Vernon  
Attorney for the Applicant(s)  
Proskauer Rose LLP  
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JAN 06 2006



# FEE TRANSMITTAL FY 2005

Complete if Known

Application Serial Number	10/642,509
Filing Date	August 18, 2003
First Named Inventor	Sellers
Group Art Unit	2632
Examiner Name	Walberg, Teresa
Attorney Docket No.	ASX-064

## METHOD OF PAYMENT

☐ Payment Enclosed:  
☐ Check ☐ Money Order ☐ Other

☒ The Commissioner is hereby authorized to credit or charge any fee indicated below for this submission to Deposit Account No. 50-3081

- ☒ Required Fees (copy of this sheet enclosed).  
☒ Additional fee required under 37 CFR 1.16 and 1.17.  
☒ Overpayment Credit.

☒ Applicant claims small entity status.

## FEE CALCULATION

### 1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	Filing	Search	Examination	Fee Paid
Utility	300	500	200	
Design	200	100	130	
Plant	200	300	160	
Reissue	300	500	600	
Provisional	200	0	0	

#### Small Entity Discount

1. TOTAL 0

### 2. EXCESS CLAIM FEES

	Fee	Small Entity Fee (\$)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent.	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent.	200	100
Total Claims		
Extra Claims		
Fee Paid (\$)		

- or HP= 2 X \$ =

HP = highest number of total claim paid for, if great than 20

Indep. Claims Extra Claims Fee Paid (\$)

- or HP= X =

HP = highest number of total claim paid for, if great than 3

Multiple Dependent Claims	Fee(\$)	Small Entity fee (\$)	Fee Paid (\$)
	360	180	

2. TOTAL: 0

### 3. APPLICATION SIZE FEE

If the specification and drawing exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Additional 50 or fraction thereof	Fee (\$)	Fee Paid
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-100 = /50 = round up to a whole number x =

3. TOTAL: 0

## CORRESPONDENCE ADDRESS

Direct all correspondence to:

Patent Administrator  
Proskauer Rose LLP  
One International Place  
Boston, MA 02110  
Tel. No.: (617) 526-9600  
Fax No.: (617) 526-9899

## FEE CALCULATION (continued)

### 4. ADDITIONAL FEES

Large Entity Fee (\$)	Small Entity Fee (\$)	Fee Description	Fee Paid
130	65	Surcharge - late filing fee or oath	
50	25	Surcharge - late provisional filing fee or cover sheet	
130	130	Non-English specification	
2,520	2,520	Request for ex parte re-examination	
120	60	Extension for reply within 1 <sup>st</sup> mo.	
450	225	Extension for reply within 2 <sup>nd</sup> mo.	
1,020	510	Extension for reply within 3 <sup>rd</sup> mo.	
1,590	795	Extension for reply within 4 <sup>th</sup> mo.	
2,160	1,080	Extension for reply within 5 <sup>th</sup> mo.	
500	250	Notice of Appeal	
500	250	Filing a brief in support of an appeal	
1,000	500	Request for oral hearing	
400	0	Petitions to the Director	
180	180	Submission of IDS	
790	395	Filing a submission after final rejection (37 CFR 1.129(a))	
790	395	For each additional invention to be examined (37 CFR 1.129(b))	
100	100	Certificate of Correction for applicant's error	100
130	65	Submission of Terminal Disclaimer	

Other fee (Specify)

Other fee (Specify)

4. TOTAL: 100

## TOTAL AMOUNT SUBMITTED

(\$) 100.00

## SIGNATURE BLOCK

Respectfully submitted,

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Reg. No.: 55,699

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JAN 06 2006



US006332961B1

(12) **United States Patent**  
Johnson et al.

(10) **Patent No.:** US 6,332,961 B1  
(45) **Date of Patent:** Dec. 25, 2001

(54) **DEVICE AND METHOD FOR DETECTING AND PREVENTING ARCING IN RF PLASMA SYSTEMS**

(75) **Inventors:** Wayne L. Johnson; Richard Parsons, both of Phoenix, AZ (US)

(73) **Assignee:** Tokyo Electron Limited, Tokyo (JP)

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** 09/508,102

(22) **PCT Filed:** Sep. 17, 1998

(86) **PCT No.:** PCT/US98/18496

§ 371 Date: Jun. 2, 2000

§ 102(e) Date: Jun. 2, 2000

(87) **PCT Pub. No.:** WO99/14394

PCT Pub. Date: Mar. 25, 1999

#### Related U.S. Application Data

(60) Provisional application No. 60/059,173, filed on Sep. 17, 1997.

(51) **Int. Cl.<sup>7</sup>** ..... C23C 14/34; C23C 14/54; G01R 23/00

(52) **U.S. Cl.** ..... 204/192.13; 204/192.12; 204/298.03; 204/298.08; 156/345; 216/59; 216/61; 118/663; 427/8; 427/10

(58) **Field of Search** ..... 204/192.12, 192.13, 204/298.03, 298.08; 156/345; 216/59, 61; 118/663; 427/8, 10

(56) **References Cited**

#### U.S. PATENT DOCUMENTS

4,700,315	10/1987	Blackburn et al.	204/192.12
5,192,894	3/1993	Teschner	204/298.08
5,241,152	8/1993	Anderson et al.	204/298.08
5,611,899	3/1997	Maass	204/298.08
5,993,615	* 11/1999	Abry et al.	204/192.13

\* cited by examiner

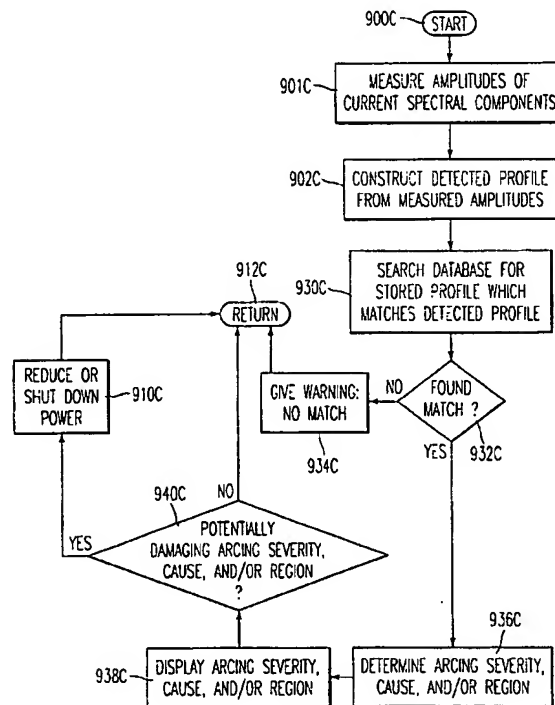
*Primary Examiner*—Rodney G. McDonald

(74) *Attorney, Agent, or Firm*—Oblon, Spivak, McClelland, Maier & Neustadt, P.C.

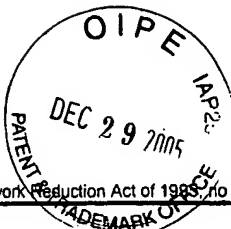
(57) **ABSTRACT**

A system and method for detecting and preventing arcing in plasma processing systems. Arcing is detected and characterized by measuring and analyzing electrical signals from a circuit coupled to the plasma. After characterization, the electrical signals can then be correlated with arcing events occurring during a processing run. Information can be obtained regarding location, severity, and frequency of arcing events. The system and method better diagnose the causes of arcing and provide improved protection against undesirable arcing, which can cause damage to the system and the workpiece.

40 Claims, 18 Drawing Sheets



Appendix A



PTO/SB/08a (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**Complete if Known**

(use as many sheets as necessary)

Sheet	1	of
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Application Number	10/642,509
Filing Date	August 18, 2003
First Named Inventor	Jeff C. Sellers
Art Unit	<del>2632</del> 3753
Examiner Name	Walberg, Teresa
Attorney Docket Number	ASX-064

[illegible]

Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>2</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

***If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.***

## Appendix A

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,967,305 *B2*  
DATED : November 22, 2005  
INVENTOR(S) : Jeff C. Sellers

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page (page 2)

Item [56]. **References Cited**, U.S. PATENT DOCUMENTS,  
6,332,631 B1 reference, replace "6,332,631 B1 12/2001 Johnson et al."  
with --6,332,961 B1 12/2001 Johnson et al.--.

Column 19

Line 11, delete "of".

MAILING ADDRESS OF SENDER:

Proskauer Rose LLP  
One International Place,  
Boston, MA 02110  
Phone No.: (617) 526-9600  
Fax No.: (617) 526-9899

Patent Administrator PATENT NO.: 6,967,305

JAN 06 2006

UNITED STATES PATENT AND TRADEMARK OFFICE  
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